COTTER CORPORATION (N.S.L.)
PARTIAL RESPONSE TO

COLORADO DIVISION OF RECLAMATION, MINING AND SAFETY
PRELIMINARY ADEQUACY REVIEW
DATED AUGUST 29, 2012
OF
Schwartzwalder Mine, Permit No. M-1977-300
Amendment 4

(LETTER SIGNED BY TOM KALDENBACH)

Submitted to DRMS
September 21, 2012

Mr. Tom Kaldenbach
Division of Reclamation, Mining and Safety
Department of Natural Resources
1313 Sherman Street, Room 215
Denver, Colorado 80203

Date: September 21, 2012

Dear Mr. Kaldenbach,

Cotter Corporation (N.S.L.) ("Cotter") presents this partial response to the Division of Reclamation, Mining and Safety ("DRMS") Preliminary Adequacy Review ("PAR") of Amendment 4 ("AM-04") to the Schwartzwalder Mine Permit M-1997-300 sent to Cotter on August 29, 2012. In order to expedite the dewatering of the Schwartzwalder Mine to a level of 150 feet below the Steve level, Cotter submits the following responses to those adequacy review comments pertaining to mine dewatering (Items 1, 2, and 22). Cotter also responds to those comments relating to monitor well installation, pan lysimeter use and reclamation reporting changes (Items 17, 20, and 21). Cotter plans to incorporate these responses and Cotter's responses to the remaining comments not addressed in this document into AM-04. Specific point-by-point responses are given by Cotter below. Above each response, the portion of the letter requesting the response is quoted in italics.

1. As an alternative to pumping down the mine pool to 500 feet below the Steve Level, DRMS will consider approving a plan to pump the mine pool down to 150 feet below the Steve Level. The Division would consider a plan for an immediate pump down of the mine pool to 150 feet and maintaining the mine pool elevation at 150 feet throughout the in-situ treatment trial phase of AM-04. An immediate pump down to 150 feet would reduce the mine pool to an elevation of approximately 63 feet below Ralston Creek in the permit area (thus preventing mine pool flow toward the creek), while also reducing the exposure of wall rock in the workings, compared to pumping down to the 500-foot level (thus minimizing uranium oxidation in the workings).

Pumping down to 150 feet would be contingent on Cotter and DRMS and/or MLRB executing an agreement that provides for Cotter withdrawing its pending appeal in the Colorado Court of Appeals (Case Number 2012CA763), and the MLRB modifying its August 11, 2010 Order to reflect the 150-foot pump-down level. This change in the pump-down level would also require Cotter to provide revised pages of the AM-04 submittal to reflect the 150-foot pump-down level.

Mine de-watering to a depth of 150 feet below the Steve level will be initiated in the following steps:

A. Cotter will procure and install a submersible pump (the "Pump") adequately suited to pump approximately 100 gpm from a mine pool depth of 150 feet below the Steve level. It is anticipated the Pump will be lowered into the Schwartzwalder mine shaft #2 with appropriate instrumentation and controls to initially pump the mine pool down to a level of 150 feet below the Steve level and

thereafter the Pump will be operated as required to maintain the mine pool level 150 feet below the Steve level.

B. Cotter will connect the discharge of the Pump to a 3-inch piping which will be routed along the Steve adit from the top of the mine shaft to the internal side of the engineered bulkhead in the Steve adit (the "Bulkhead").

C. Cotter will use the currently installed 4-inch stainless steel pipe penetration as a conduit for the 3-inch pipe through the Bulkhead. On the outside of the Bulkhead, Cotter will attach enough additional 3-inch piping to convey the mine water ("RO Feed") out the Steve adit to the existing winterized water treatment building for processing via a reverse osmosis ("RO") system. The 4-inch stainless steel penetration will also be used to convey telemetry and control cabling to avoid EMF interference from the high voltage power cables that will be fed through a separate and currently installed 3-inch stainless steel Bulkhead penetration.

D. Cotter will procure and install a (RO) unit, with a nominal design capacity of 100 gpm, and similar to the one shown in Figure 1 below, to treat mine pool water to meet Cotter's existing discharge permit (Colorado Discharge System Permit CO-0001244) requirements.

E. The discharge of the RO unit will be in two streams; approximately 70% of the RO Feed will be available for discharge under Cotter's current discharge permit (the "RO Effluent") while the remaining approximately 30% of the RO Feed will be returned to the mine pool (the "RO Concentrate"). Included in this RO Concentrate will be any other waste water generated by the operation of the RO unit, including but not limited to filter backwash and membrane wash water. See Figure 2 below, the RO unit process flow diagram.

Figure 1 Typical Industrial Reverse Osmosis Unit

F. The RO unit will be equipped with appropriate instrumentation and controls to provide for feed pump starting and stopping, chemical injections for pH control and anti-fouling and other appropriate operational controls.

G. Cotter will plumb the RO Effluent directly into the existing water treatment system discharge piping to provide a common discharge into Ralston Creek. Additionally, to be prepared for an unanticipated event where the uranium levels in the RO Effluent would not meet discharge specifications or permitting issues arise from Water Quality Control Division sampling requirements, plumbing will enable delivery of the RO Effluent, as feed, to the existing water treatment system. In this water treatment system, further uranium removal (polishing) can be accomplished prior to discharge into Ralston Creek.

H. The RO Concentrate will be pumped from the discharge of the RO unit, via a forwarding pump through 1 ½-inch piping, to the Steve adit and through the 3-inch diameter stainless steel pipe penetration in the Bulkhead. This 1 ½-inch pipe will be continued to the top of the Schwartzwalder Mine shaft #1 and down the shaft to a depth of at least 500 feet.

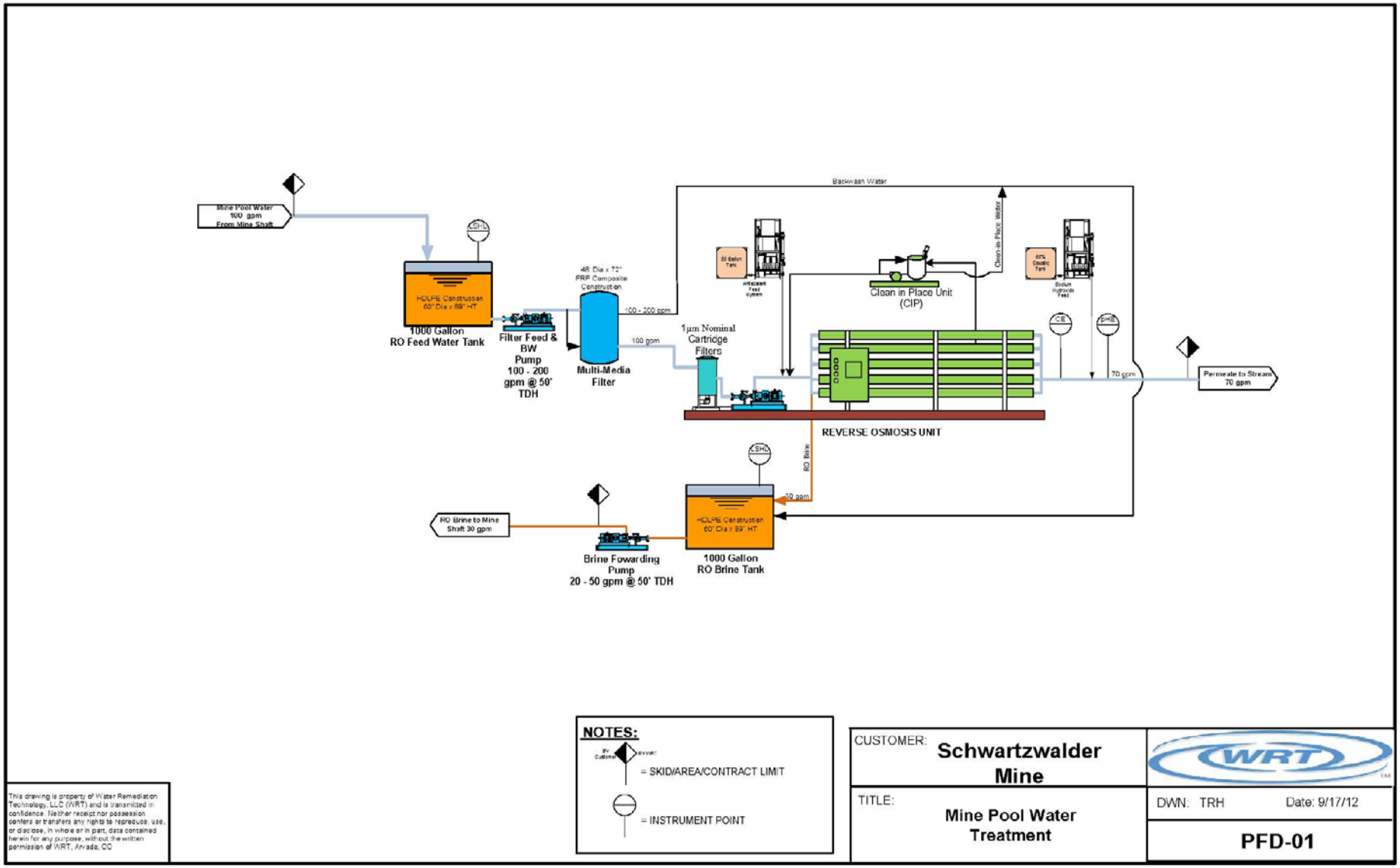


Figure 2 RO Unit Process Flow Diagram

An accelerated schedule for mine pool de-watering to 150 feet below the Steve level is provided in Figure 3 below.

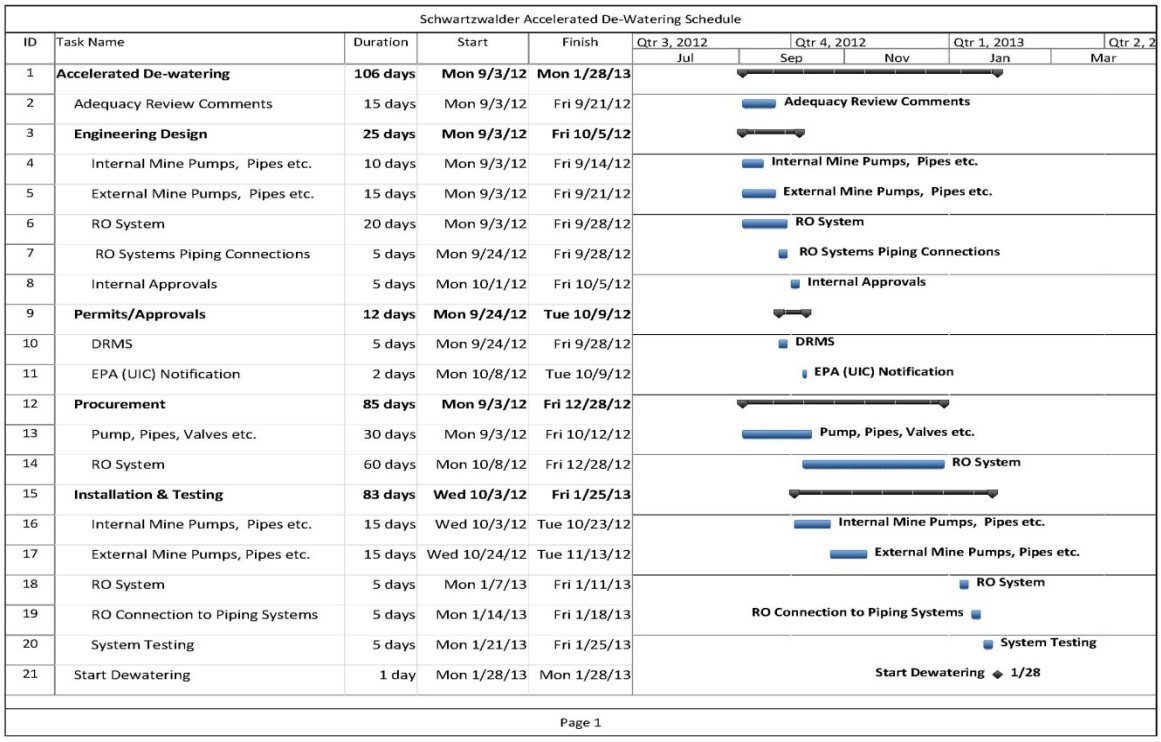


Figure 3 De-Watering Schedule

This schedule does not take into account possible delays, such as those associated with adverse weather conditions, which will extend the schedule. Table 1 below provides an itemized accounting of the cost associated with the accelerated de-watering.

Table 1 De-Watering Cost

De-Watering Equipment	Estimated Cost	Basis for Cost
Submersible Pump & Mounting Hardware	$8,100	TR Pump Invoice
Submersible Pump Installation	$5,900	Cotter quote
System Piping & Associated Couplings	$3,200	Vendor Quotes (various)
RO Unit	$300,000	WRT Quote
RO Unit and Associated Piping Installation	$8,600	Kessler Quote
1 set of RO Replacement Membranes	$20,000	WRT Quote
2 year Supply of RO Chemicals	$17,400	WRT Quote
TOTAL	$363,200	

2. Please change the chronologic sequence of the tasks shown in Figure 18 of Exhibit E so that pumping down the mine pool is not delayed by a task or a portion of a task that is not absolutely essential for pumping down the mine pool. Please add a statement at the

beginning of Section E-5.3 that clearly explains Cotter will immediately initiate pumping down the mine pool, and the pumping will precede the initiation of in-situ biologic treatment of the mine pool.

Cotter intends to immediately accelerate pumping down the mine pool as detailed in the De-Watering Schedule shown in Figure 3 above. This pumping will be done before proceeding with in-situ biologic treatment of the mine pool. Figure 18 of Exhibit E will be amended to reflect this change in the chronologic sequence of task and will be similar to Figure 4 below.

ID	Task Name	Start	Finish
1	**Mine Dewatering with In-situ Treatment**	**Mon 9/24/12**	**Mon 3/3/14**
2	DRMS Approval of De-watering Portion of Amendment No. 4	Mon 9/24/12	Fri 9/28/12
3	Licensing and Permitting	Mon 10/1/12	Tue 10/9/12
4	Install Mine Pool De-watering Pump and Piping (incl. Supports)	Wed 10/3/12	Tue 10/23/12
5	RO Subcontractor Mobilization	Mon 10/8/12	Fri 12/28/12
6	Water Treatment Facility Modifications (incl. Installation of New RO System)	Mon 11/19/12	Fri 1/25/13
7	Start De-watering	Mon 1/28/13	Mon 1/28/13
8	Mine Dewatering to 150' Below the Steve (estimated duration)	Tue 1/29/13	Tue 4/30/13
9	In-situ Subcontractor Mobilization	Tue 4/2/13	Mon 8/5/13
10	Water Treatment Facility Modifications to Incorporate In-Situ Treatment	Tue 8/6/13	Mon 9/16/13
11	Initiate Evaluation of In-Situ Treatment	Tue 9/17/13	Mon 12/9/13
12	In-Situ Treatment of the Mine Pool	Tue 12/10/13	Mon 3/3/14

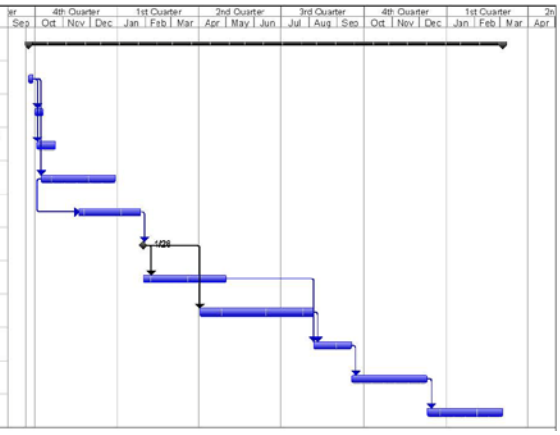


Figure 4 Tentative Mine De-Watering with In-Situ Treatment Schedule

17. To enable DRMS to publish on its Laserfiche imaging system the progress of reclamation activities, please add to Exhibit E a commitment to submit to DRMS a reclamation report within 45 days after the end of each calendar quarter. Please include in each reclamation report the following information from activities conducted in the previous quarter:

a. Installation of pumping and treating facilities,
b. Summary of pumping and water treatment activities,
c. Summary of ex-situ and in-situ treatment performance,
d. Summary of corehole and fracture sealing activities,
e. Summary of alluvial fill disposal activities, and
f. Concentrations of constituents of concerns after alluvial fill is removed.

Cotter agrees to include the items a through f above in future reclamation reports submitted within 45 days after the end of each calendar quarter.

20. Please add to Exhibit E a plan for installing a monitoring well in the alluvium beneath the South Waste Rock Pile.

A plan for installing a monitoring well in the alluvium beneath the South Waste Rock Pile has been prepared by Whetstone Associates on Cotter's behalf and is included below.

Whetstone Associates

Technical Memorandum

To:	Tom Kaldenbach (DRMS) John Hamrick (Cotter Corporation, N.S.L.)	**4109C**
From:	Susan Wyman, P.E/, P.G. (Whetstone Associates)	
Date:	September 17, 2012	
Subject:	Monitoring Well Installation in the South Waste Rock Pile at the Schwartzwalder Mine	

The Colorado Division of Reclamation, Mining and Safety (DRMS) recommended that Cotter Corporation (N.S.L.) (Cotter) install a monitoring well in the South Waste Rock Pile (South WRP) at the Schwartzwalder Mine. DRMS provided their recommendations in their August 29, 2012, preliminary adequacy review of Cotter's May 1, 2012, application to amend the Schwartzwalder Mine Reclamation Plan (AM-04). The purpose of this memorandum is to describe the proposed well location, depth, and well completion specifications.

Well Location

The proposed monitoring well location is shown in Figure 1 using the temporary well ID of "MW-A". The well will be assigned a sequential numeric ID when drilling begins. The site is located alon the existing access road on the waste rock pile, approximately 170 feet from the toe of the pile, at an elevation of 6,645 ft.

Well Depth

A cross section of the monitoring well location is provided in Figure 2. The cross section was developed base on site topography, depth of monitoring well MW0, and the McDermid (1983) geotechnical investigation for expansion of the waste rock pile. Based on the cross section, the expected depth to bedrock is 48.6 ft. The hole will be drilled approximately 18 inches into bedrock and the total depth of the well will be approximately 50 ft.

Well Completion

The monitoring well will be drilled using an air rotary rig with water or foam as the drilling fluid. The borehole diameter will be a minimum of 6 inches. The well will be completed using 2-inch ID Schedule 80 PVC and 0.02-inch (20-slot) factory-slotted PVC casing. Well completion specifications are as follows:

- 2-inch ID, flush-threaded, Schedule 80 PVC
- 5 ft of 0.02-inch (20-slot) factory slotted Schedule 80 PVC screen
- Centralizers will be placed above and below the screen and every 20 feet within the blank section of casing above the screen.
- 10-20 Colorado silica sand filter pack

Whetstone Associates, Inc.
104 W. Ruby Avenue ♦ Gunnison, Colorado 81230 ♦ Phone 970-641-7471 ♦ Fax 970-641-7431

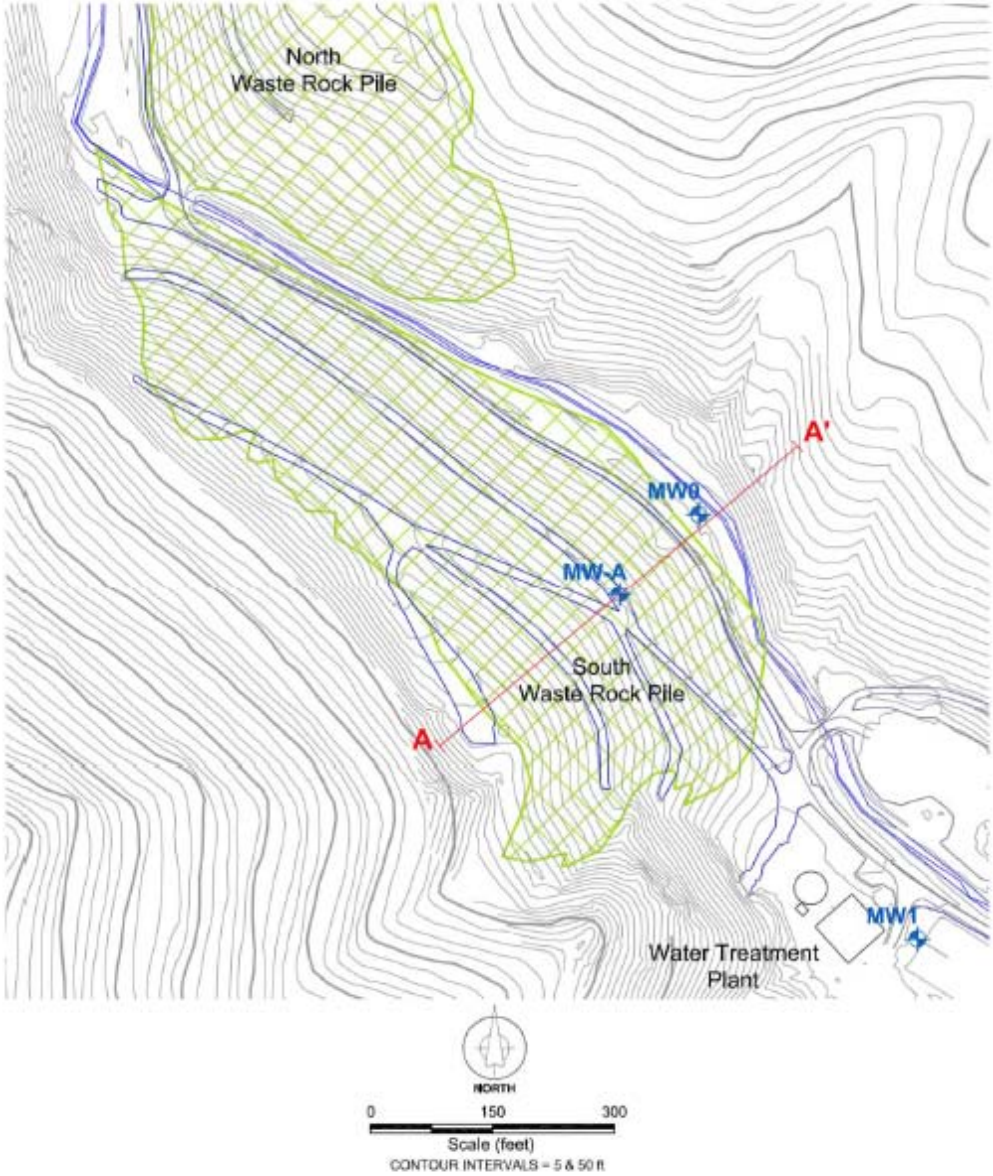


Figure 1. Proposed Monitoring Well Location

- Filter pack will be tremmied into place and tagged at 3 – 5 ft above the top of the screen.
- Filter pack will be surged (mechanically agitated and settled) before installing the seal
- Annular seal will consist of bentonite chips to 5 ft below ground surface.
- Casing will be set or cut so that the inner PVC well casing is 18 – 22 inches above ground surface.
- Surface completion will include an outer steel casing and locking steel well cap set in a concrete pad that slopes slightly away from the well.
- Two to three traffic posts (bollards) will be installed around the surface completion and painted orange. One traffic post shall be removable for access during sampling.
- All well will be padlocked (typically with keyed alike locks provided by Cotter or its consultants).

Well drilling and construction will follow standard practices for environmental monitoring wells (including non-metallic environmental pipe dope on drill rods and wearing clean latex or nitrile gloves while handling casing).

Well Development

The monitoring well will be thoroughly developed to remove residual drilling fluids and cuttings. Well development will be conducted by bailing or by airlifting from above the screen and surging within the screened zone using a double surge block. At least six well volumes will be evacuated and field parameters (temperature, pH, and electrical conductivity) will be monitored. Well development will continue until the discharge water is clear and free of visible turbidity and field parameters are stable to within 10% or 0.1 pH unit on consecutive readings. A groundwater sample may be collected for laboratory analysis at the end of well development.

REFERENCES

DRMS, 2012. Schwartzwalder Mine, Permit No. M-1977-300 Amendment 4 (AM-04), Preliminary Adequacy Review. Letter from Tom Kaldenbach, Colorado Division of Reclamation, Mining and Safety (DRMS) to John Hamrick (Cotter Corporation, N.S.L.), August 29, 2012. 4 pp.

McDermid Engineering Associates, Inc. and Geo-Hydro Consulting, Inc., 1983. Schwartzwalder Mine Waste Rock Pile Stability, February, 1983.

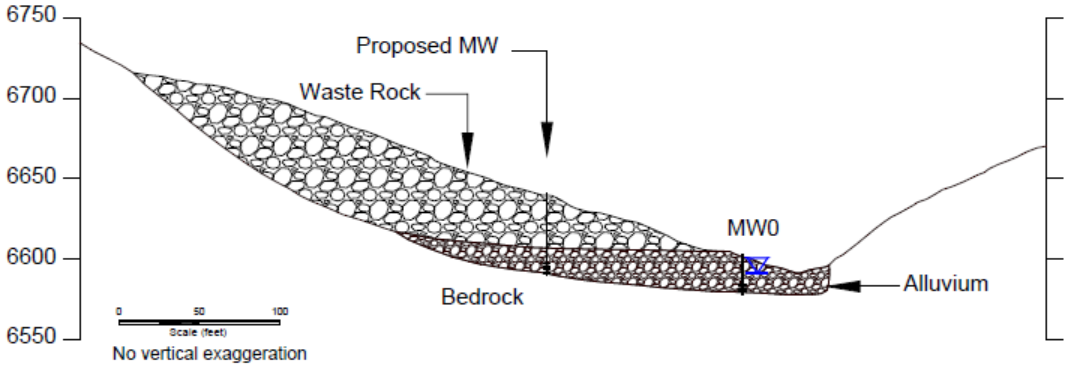


Figure 2. Cross Section of South Waste Rock Pile Showing Proposed Monitoring Well

21. Please consider using pan lysimeters instead of suction lysimeters for monitoring infiltration through the South Waste Rock Pile.

A plan for using and installing pan lysimeters for monitoring infiltration through the South Waste Rock Pile has been prepared by Whetstone Associates on Cotter's behalf and is included below.

Whetstone Associates

Technical Memorandum

To:	John Hamrick (Cotter Corporation, N.S.L.)	**4109C**
From:	Susan Wyman, P.E/, P.G. (Whetstone Associates)	
Date:	September 17, 2012	
Subject:	Lysimeter Installation in the South Waste Rock Pile at the Schwartzwalder Mine	

In the May 1, 2012 application to amend the Schwartzwalder Mine Reclamation Plan (AM-04), Cotter Corporation (N.S.L.) (Cotter) proposed to install three porous cup suction lysimeters in the South Waste Rock Pile. In their preliminary adequacy review of the amendment application, the Colorado Division of Reclamation, Mining and Safety (DRMS) recommended pan lysimeters in lieu of the porous cup suction lysimeters (DRMS, 2012). The purpose of this memorandum is to describe the installation and monitoring of pan lysimeters for monitoring infiltration through the South Waste Rock Pile.

The Soil Moisture® model 1960 pan lysimeters will be installed at three locations in the South Waste Rock Pile. The locations have been selected to be representative of conditions across the pile, and are shown in Figure 1.

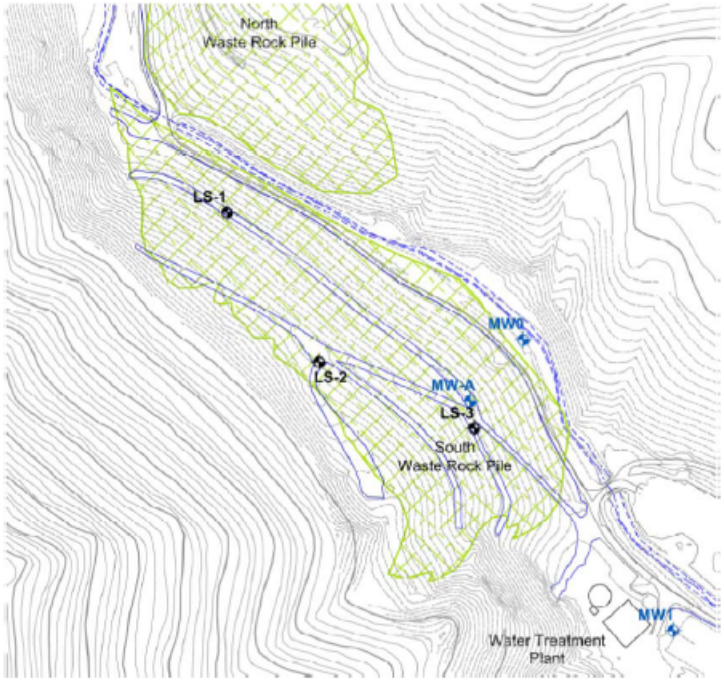


Figure 1. Proposed Pan Lysimeter Locations

Whetstone Associates, Inc.
104 W. Ruby Avenue ♦ Gunnison, Colorado 81230 ♦ Phone 970-641-7471 ♦ Fax 970-641-7431

Pan lysimeters are designed for taking samples in conditions of soil saturation and subsequent drainage conditions. The Soil Moisture® model 1960 pan lysimeter consists of collection bucket, vent tube (aka zero tension equilibrium tube), and sample access tube. Filter sand is place on top of the lysimeter with a mesh screen and felt pad, to prevent sediment from entering the lysimeter (Figure 2).

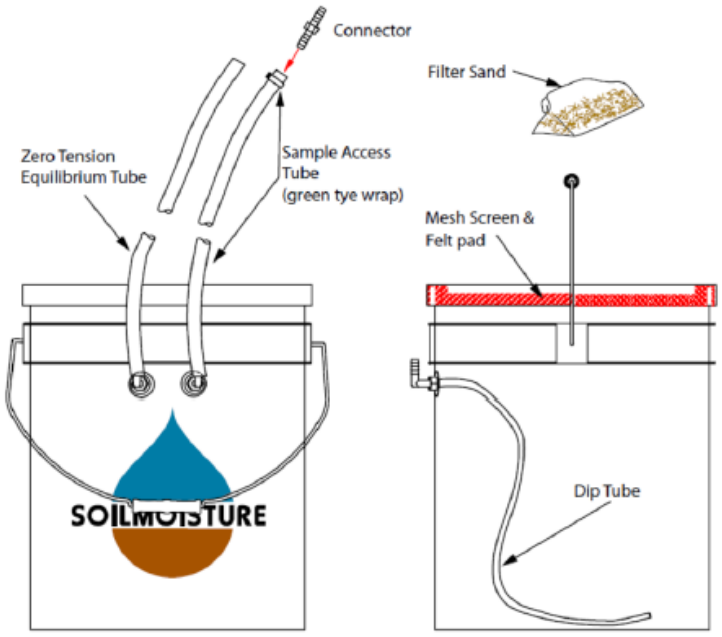
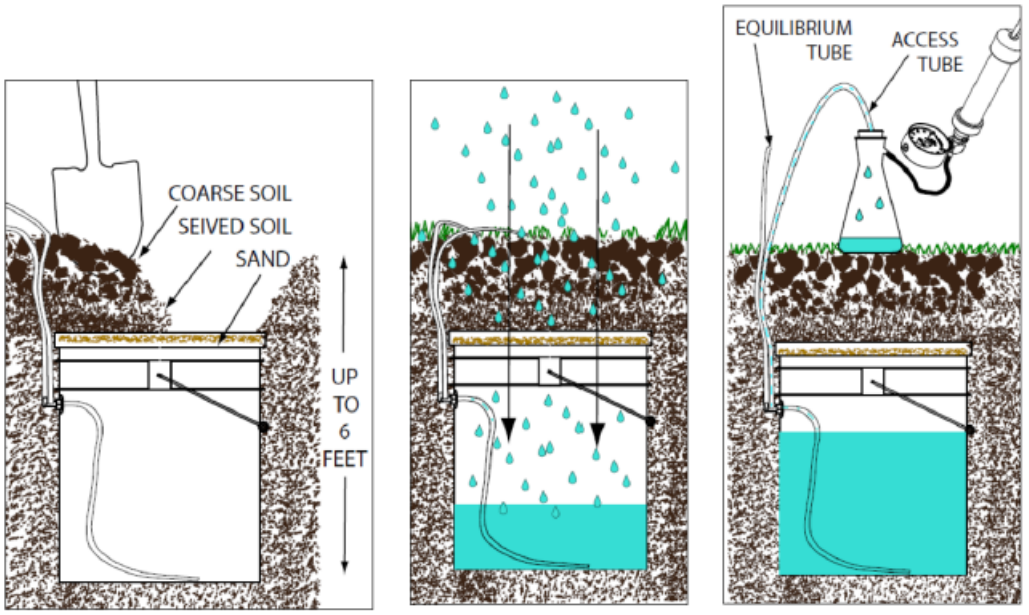


Figure 2. Pan Lysimeter Schematic

To install the lysimeters, a "plug" of vegetated cover will be removed using a backhoe or by manual excavation with a shovel, taking care not to disturb the established vegetation and soil profile. The soil plug will be set aside and replaced after the lysimeter is installed. A hole will be excavated into the waste rock pile, large enough to accommodate the collection vessel (Figure 3). The vent tube and sample access tube will be attached to the lysimeter. The lysimeter cover, with built-in mesh screen and felt pad, will be attached to the collection vessel and topped with inert, clean, silica sand. The soil plug will be replaced on top of the lysimeter and the tubing will be connected to the surface and capped.



(Figure 4) - Dig the hole, refill fine to coarse.

(Figure 5) - Bucket collecting water

(Figure 6) - Collecting a sample

Figure 3. Pan Lysimeter Installation and Sampling

The lysimeters will collect moisture that infiltrates through the reclaimed cover. Samples will be collected using a the Soilmoisture® Model 1900K3 Sample Extraction Kit by attaching the sample access tube to the collection flask, and the other to a vacuum pump (such as the Soilmoisture® Model 2005G2 vacuum hand pump). As vacuum pressure is applied, the sample that has been collected in the lysimeter bucket will flow into the collection flask.

Lysimeters will be sampled monthly or quarterly depending on meteorological conditions. Samples will be collected and analyzed for uranium and standard field parameters (e.g., conductivity and pH). These data will help to ascertain whether or not the vegetated soil cap is sufficient to effectively minimize net infiltration and the potential for subsurface leaching as intended. One year of lysimeter studies is expected to be sufficient to evaluate this potential mechanism.

REFERENCES

DRMS, 2012. Schwartzwalder Mine, Permit No. M-1977-300 Amendment 4 (AM-04), Preliminary Adequacy Review. Letter from Tom Kaldenbach, Colorado Division of Reclamation, Mining and Safety (DRMS) to John Hamrick (Cotter Corporation, N.S.L.), August 29, 2012. 4 pp.

SoilMoisture, 2009. Operating Instructions for the 1960 Pan Lysimeter. SoilMoisture Corporation, Santa Barbara, CA, July, 2009. 4 pp.

22. Please consider including sulfuric acid dosing for pH adjustment prior to the RO system.

The RO system detailed in Item 1 above incorporates a chemical injection system for the sole purpose of pH control.